TECHNYL® C 52G3 MZ25 GREY R7035

Polyamide 6

Solvay Engineering Plastics

Message:

TECHNYL® C 52G3 MZ25 Grey R7035 is a Non-phosphorous and Non-halogenated flame retardant polyamide 6, reinforced with 25% of mineral filler, heat stabilized, for injection moulding. This grade offers a robust glow wire resistance, combined with enhanced processing behavior suitable for thin wall parts.

General Information	
UL YellowCard	E44716-457081
Filler / Reinforcement	Mineral filler, 25% filler by weight
Additive	heat stabilizer Flame retardancy
Features	UV Laser Markable Anti-arc Phosphorus content, low (to none) Halogen-free
Uses	Electrical/Electronic Applications
Agency Ratings	UL QMFZ2
Appearance	Black Grey
Forms	Particle
Processing Method	Injection molding
Resin ID (ISO 1043)	PA6-MD25 FR(30)

Physical	Dry	Conditioned	Unit	Test Method
Density	1.37	--	g/cm³	ISO 1183/A
Water Absorption				ISO 62
23°C, 24 hr	1.1	--	%	ISO 62
Saturated, 23°C	6.0	--	%	ISO 62
Equilibrium, 23°C, 50% RH	2.3	--	%	ISO 62

Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	6900	2800	MPa	ISO 527-2/1A
Tensile Strength				
Fracture, 23°C	80.0	--	MPa	ASTM D638
Fracture, 23°C	80.0	35.0	MPa	ISO 527-2/1A
Tensile Elongation (Break, 23°C)	3.0	--	%	ASTM D638, ISO 527-2

Flexural Modulus				
23°C	6700	--	MPa	ASTM D790
23°C	6900	2900	MPa	ISO 178
Flexural Strength				
23°C	130	--	MPa	ASTM D790
23°C	145	55.0	MPa	ISO 178
Impact	**Dry**	**Conditioned**	**Unit**	**Test Method**
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	3.0	--	kJ/m^2	ISO 179/1eA
23°C	3.0	3.5	kJ/m^2	ISO 179/1eA
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	45	--	kJ/m^2	ISO 179/1eU
23°C	45	90	kJ/m^2	ISO 179/1eU
Notched Izod Impact (23°C)	45	--	J/m	ASTM D256
Thermal	**Dry**	**Conditioned**	**Unit**	**Test Method**
Heat Deflection Temperature				
0.45 MPa, not annealed	200	--	°C	ISO 75-2/Bf
1.8 MPa, not annealed	150	--	°C	ASTM D648
1.8 MPa, not annealed	145	--	°C	ISO 75-2/Af
Melting Temperature	222	--	°C	ISO 11357-3
Electrical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Dielectric Strength (0.800 mm)	37	--	kV/mm	IEC 60243-1
Comparative Tracking Index (Solution A)	500	--	V	IEC 60112
Flammability	**Dry**	**Conditioned**	**Unit**	**Test Method**
Flame Rating				UL 94
0.8 mm	V-2	--		UL 94
1.6 mm	V-2	--		UL 94
3.2 mm	V-2	--		UL 94
Glow Wire Flammability Index				IEC 60695-2-12
1.6 mm	960	--	°C	IEC 60695-2-12
3.2 mm	960	--	°C	IEC 60695-2-12
Oxygen Index	31	--	%	ISO 4589-2
Injection	**Dry**	**Unit**		
Drying Temperature	80		°C	
Suggested Max Moisture	0.20		%	
Rear Temperature	230 - 235		°C	
Middle Temperature	235 - 240		°C	

Front Temperature	235 - 245	°C
Mold Temperature	60 - 90	°C

Injection instructions

The material is supplied in airtight bags, ready for use. In case that the virgin material has absorbed moisture, it must be dried with a dehumidified air drying equipment, dew point mini -20°C. Recommended time 2-4hInjection Advice:
All reinforced flame retardant compounds generate some level of abrasion/corrosion to the steel processing equipment.
These issues can be worsened by using incorrect processing conditions (temperatures, residence time, moisture level ...) during the moulding process. Therefore, Solvay recommends to use the advised processing conditions detailed in this technical data sheet. For equipment that comes into contact with molten flame retarded compounds, Solvay advises to use a steel containing high chromium & high carbon content (minimum concentration of 16% Chromium) to prevent corrosion and abrasion. For the correct reference of steel associated to flame retardant compounds processing, please refer to your equipment manufacturers. For Mould Temperature, in the case of parts where the surface roughness is required we can recommend a temperature at 120°C. Of course it should be noted that this improvement in the surface appearance may be at the expense of the cycle time.

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